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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,153	12/04/2001	Aris Papasakellariou	TI-32538	1130
23494	7590	02/23/2005	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED			FILE, ERIN M	
P O BOX 655474, M/S 3999			ART UNIT	
DALLAS, TX 75265			PAPER NUMBER	
			2634	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/007,153

Applicant(s)

ARIS PAPSAKELLARIOU

Examiner

Erin M. File

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12/4/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10,11 and 13-16 is/are allowed.
- 6) ☒ Claim(s) 1,6-9 and 12 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### ***Drawings***

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by

Karlsson.

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**Claim 1**, Karlsson discloses a spreading factor detector (title) in a code division multiple access system (abstract). Each matched filter (fig. 6, 616) has a unique spreading factor and de-spreads with a spreading code corresponding to the spreading factor. De-spread signals (617) are input to the spreading factor detector (614). Spreading factor detector (614) estimates a spreading factor that has the highest possibility of having been used for the data channel by calculating the mean power of each matched filter's output signal. The power is the magnitude squared of the signal, meeting the limitation of taking the absolute value. It then compares all the mean powers and determines which is the maximum. The spreading factor of the matched filter which corresponds to the maximum mean power is the non-zero rate spreading factor for the data channel. The non-zero rate spreading factor detector 614 then calculates the signal energy of the output signal from the matched filter having the estimated spreading factor ([0051]).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in further view of Wang.

**Claim 6**, inherits the limitations of Claim 1, Karlsson fails to disclose making a spreading factor decision of includes comparing weighted linear combinations of ratios said absolute values for differing spreading factors. However, Wang discloses a spreading code acquisition method in which signals are spread (fig. 1, 105), weighted (fig. 1,  $w_{opt1-M}$ ) and then the absolute value is taken (fig. 1, 110). Wang discloses weighted combinations are used in order to achieve spreading code acquisition (col. 4, lines 45-54). Because Wand discloses that this method of using weighted combinations can be used to achieve code acquisition, it would be obvious to one skilled in the art at the time of invention to incorporate Wang's spreading code acquisition method into Karlsson's spreading code factor detection method.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter

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which applicant regards as the invention. Claim 12 claims dependence on the method of any of claims 11 and 12. Claim 12 dependent on Claim 12 (12/12) is therefore rendered indefinite because it is dependent on itself.

7. Claims 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7 states the recitation,

“(c) making a spreading factor decision from said absolute values of step (b); (d) when said decision of step (c) is a first or second spreading factor, then despreding with both said first and second spreading factors, and when said decision of step (c) is a third spreading factor, then despreding with said third spreading factor.”

The recitation is unclear. The claim does not specify what a first, second, or third spreading factor specifically is, or how these factors are found. Therefore Claim 7, and its dependent Claims 8 and 9 are rendered vague and indefinite.

### ***Claim Objections***

8. Claim 3 objected to because of the following informalities:

the recitation, “a) said absolute values are weighted with a signal-to-noise *ration* estimate.” The word *ration* is a typographical error and should be corrected.

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the recitation, "(c) includes comparing weighted linear combinations of ratios said absolute values for differing spreading factors". A preposition, preferably, *of*, should be inserted between *ratios* and *said absolute values* for clarity.

Appropriate correction is required.

9. Claims 2-5 are objected to as dependent upon a rejected Claim, but would be allowable if rewritten in independent form.

10. Claim 10,11, 13-16 are allowable in view of the known prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin M. File whose telephone number is (571)272-6040. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

2.9.2005

Erin M. File



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